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INTERNATIONAL COOPERATION ON ECO-LABELLING AND ECO-CERTIFICATION PROGRAMMES

and

MARKET OPPORTUNITIES FOR ENVIRONMENTALLY FRIENDLY PRODUCTS

Eco-labelling and market opportunities for environmentally friendly products

Report by the UNCTAD secretariat

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Executive Summary

1. By decision 415(XL), the Trade and Development Board established an Ad Hoc Working Group (AHWG) on Trade, Environment and Development.[1] At its first session, the AHWG will examine eco-labelling, as well as market opportunities for "environmentally friendly" products. In accordance with the terms of reference of the AHWG as well as the agenda for its first session, the examination of international cooperation on eco-labelling will focus on (i) a comparative analysis of current and planned schemes, with a view to discussing concepts such as mutual recognition and equivalencies; and (ii) an examination of the possibilities for taking into account the interests of developing countries in the elaboration of eco-labelling criteria. Work in the area of "environmentally friendly" products will initially concentrate on ways and means to define and certify such products. This report contains an analysis of these issues.

2. The report is based on policy research carried out in UNCTAD and takes account of work undertaken in other forums. Preliminary conclusions of this work have been reported to UNCTAD's intergovernmental bodies.[2] UNCTAD has also provided inputs to other forums.[3] Work in UNCTAD has benefited from extrabudgetary resources provided by the International Development Research Centre (IDRC) and the Government of the Netherlands. The secretariat organized a workshop on "Eco-labelling and International Trade" as part of the technical cooperation project funded by IDRC. The report of the workshop, which was held at Geneva on 28-29 June 1994, is being made available to the AHWG.[4]

3. With respect to eco-labelling, the report shows that, despite being directed primarily at environmental objectives, there is nevertheless concern that eco-labelling programmes may at times discriminate against foreign producers because of the ways in which they operate and may in effect act as a non-tariff barrier to trade. The coexistence of different eco-labelling schemes may compound problems for foreign producers, in particular exporters in developing countries, who have to obtain information and adjust to the requirements of different markets if they want to qualify for an eco-label.

4. The costs of adjustment for firms that wish to comply with eco-labelling criteria may be significant. For developing country producers, the costs involved in the use of specific chemicals and other raw materials, capital investments, as well as testing and verification tend to be particularly relevant. Designing and producing a product that complies with eco-criteria may be particularly costly for small-scale producers. In addition, process-related criteria, which tend to be based on environmental and technological conditions in the importing country, may imply high costs for foreign producers and may be environmentally inappropriate in the context of their local conditions.

5. Taking account of the interests of developing countries in the development of eco-labelling programmes requires improved transparency as well as the association of developing contries with the process of determining criteria for products of export interest to them. The establishment of international guidelines on eco-labelling, the acceptance by eco-labelling programmes in industrialized countries of different but "equivalent" environmental criteria which take account of the environmental conditions in developing countries, as well as mutual recognition could also serve developing countries' interests. The report examines these concepts.

6. With respect to "environmentally friendly" products, the report stresses the difficulties that may arise in defining such products and the fact that consumer concern is now focusing on the credibility of environmental claims made by manufacturers. While recognizing that there may be misleading environmental claims, the report nevertheless points out that there may be trading opportunities for environment-friendly products from developing countries. Their environmental claims must, however, be credible. Broad strategies that developing countries may use to substantiate the environmental claims of their products have been identified by the report. These consist of giving the right signals to their

importers regarding their commitment to the environmental issues at the firm, national and international level. The report also outlines the possible use of third party certification schemes by developing countries in order to promote their exports of environment-friendly products.

7. The conclusions and recommendations of the report are contained in Chapter III. Annex I reports on ongoing work in the area of eco-labelling in other international organizations as well as on UNCTAD's technical cooperation activities, while annex II lists the criteria taken into consideration in attributing the eco-label in the Netherlands.

I. ECO-LABELLING

A. Introduction

8. Eco-labelling implies the use of labels in order to inform consumers that a product is determined by a third party to be environmentally more friendly relative to other products in the same category. Eco-labels are voluntary and establish no generally binding requirements or bans. Eco-labelling aims to protect the environment through raising consumer awareness about the environmental effects of products and hence changing their behaviour, as well as changing the manufacturing design of products in favour of environment-friendly products and technologies. In markets with consumer preferences for "environment-friendly" or "green" products, eco-labels serve as a marketing instrument. Governments and environmental groups tend to support eco-labelling schemes as they set incentives for producers to improve the environmental qualities of their products.

9. Although eco-labelling is primarily directed at achieving environmental objectives, concern has arisen that eco-labelling may have adverse effects on trade. Eco-labelling may at times be discriminatory because of the ways eco-labelling programmes operate. For example, domestic industry can more easily influence the selection of product categories and the determination of criteria and thresholds. Since eco-labelling tends to be based on domestic environmental conditions and priorities, the criteria may focus on specific environmental attributes which can be met more easily by domestic firms and overlook environmental advantages of imported products. The determination of criteria inevitably involves value judgements and may have a significant influence on the trade effects of eco-labelling. Testing and verification procedures, including plant inspection, may be particularly costly for foreign producers. There is also increasing concern about the possible trade effects of process-related criteria.

10. In addition, the proliferation of eco-labelling schemes may adversely affect foreign producers, in particular exporters in developing countries who may face difficulties in obtaining information and in adjusting to the requirements of different markets.

11. Developing countries are becoming more exposed to the effects of eco-labelling since some of the new product categories which are being selected for eco-labelling are of great export interest to them (for example, textiles and footwear).[5] According to some preliminary estimations, around 45 per cent of the imports in broad product categories which have been earmarked for eco-labelling in the European Union originate in developing countries. Secondly, eco-labelling programmes for these particular products include criteria regarding raw materials and production processes, which may be particularly difficult to comply with for foreign producers. Trade and sustainable development aspects of eco-labelling are consequently of great interest and concern to developing countries.

B. Eco-labelling in practice

12. Eco-labels are awarded by a third party for products which meet preset environmental criteria (known in the International Organization for Standardization (ISO), as "type I" labels, see box 1). Producers can apply for such labels on a voluntary basis. Eco-labelling programmes are based on a life-cycle approach, i.e. they try to identify products which have less environmental impact than others in the same product category during their life-cycle, including production, distribution, use, consumption, and disposal.

13. The award procedure consists broadly of two stages. The first consists of selection of product categories and the development of the criteria for the award of the label. The second consists of the administration and verification required for granting of the labels to manufacturers.

Box 1
Definitions of environmental labelling

The International Organization for Standardization (ISO) has defined three types of environmental labelling as follows:

Type I	is based on criteria set by a third party
Type II	is based on self-declaration by manufacturers
Type III	is based on product information covering several environmental aspects, but without comparing or weighing such aspects

Type I labelling, known as eco-labelling has the following characterists:

- It is a third-party scheme. Application for the eco-label is voluntary;
- Eco-labelling programmes try to identify products which have less environmental impact than other products in the same category during their entire life-cycle;
- The selection of product categories and the determination of criteria and thresholds is done by a Board, using a consultative process involving interest groups as well as technical inputs based on scientific principles;
- The criteria and thesholds for each product category are publicly available.
- Products which meet the eco-labelling criteria may use the eco-label bearing the logo of the eco-labelling programme for a fixed period, against payment of the costs of processing the application and a fee for its use. In certain cases the principal reason(s) for awarding the label may be stated.

Type II labelling schemes are based on self-declaration by companies. Typical examples of type II labels are claims that products are "biodegradable" or "recyclable": There is neither a third party which verifies manufacturers' declarations, nor pre-established definitions or criteria with which products must comply to bear the label.

Type III labelling consists of qualified product information using preset indices, without making a judgement on the importance of each factor. The "Scientific Certification scheme" of the United States is probably the only programme that fits the type-III definition. The ISO has not as yet undertaken efforts to try to standardize this type of programme.

Source: John Henry, "Environmental labelling - What is the difference between schemes and will they have an impact on world trade?", Paper presented to the PASC Environmental Forum, Bangkok, 16 May 1994.

14. In the first stage, product categories are selected by a Board or similar body, from proposals submitted to it for examination. An assessment is then made of the environmental, technical, and market conditions associated with a particular product category, and draft criteria and thresholds are developed. The

draft criteria are released for public review for a certain period (for example 60 days). Comments from the public may be incorporated into the criteria, after which they are published. The criteria are reviewed every three to four years to take account of the change in technology, and other factors which may affect the product criteria.

15. In the second stage, suppliers and manufacturers of products can apply for the use of the eco-label. The applicant must normally pay for the testing costs and certification costs, which may include plant visits. Applicants must also pay a fee for the use of the eco-label. Responsibility for this stage can be given to a certification body.

16. In practice, eco-labelling programmes have proven to be more difficult to implement than anticipated. It has been found difficult to assess comprehensively the entire life-cycle of the product and to establish product categories which should be awarded the label. There are also multiple trade-offs between the various objectives in practically every aspect of the programmes (see below).[6] Despite these difficulties, the number of eco-labelling programmes has been growing rapidly.

Box 2
Overview of eco-labelling programmes

Country/group	Name of the programme	Date of creation
Germany	Blue Angel	1977
Canada	Environmental Choice Program	1988
Japan	EcoMark	1989
Nordic countries	Wite Swan	1989
United States	Green Seal	1989
Sweden	Good Environmental choice	1990
New Zealand	Environmental Choice	1990
India	Ecomark	1991
Austria	Austrian eco-label	1991
Australia	Environmental Choice	1991
Rep. of Korea	Ecomark	1992
Singapore	Green Label Singapore	1992
France	NF-Environnement	1992
Netherlands	Stichting Milieukeur	1992
European Union	European flower	1992
Croatia	Environmentally friendly	1993

Source: UNCTAD

17. Currently there are about 20 type I eco-labelling programmes (see box 2). The oldest programme is the German "Blue Angel", which was established in 1977. The more successful programmes in terms of number of products using eco-labels are the Blue Angel and the Japanese EcoMark. For example, almost 900 manufacturers use the German eco-label for a total of 3500 products (see box 3). Eco-labelling programmes also exist in a number of developing countries, including India, the Republic of Korea, and Singapore. Schemes are being planned in many other developing countries and countries in transition, for example Brazil, Chile, Colombia, Indonesia, Poland and Thailand.

Box 3
Number of product categories and of products under different eco-labelling programmes

	Categories	Products	Number of licences
Canada	34	700	120
EU	2	1	
France	2		
Germany	77	3,503	873
Japan	55	2,500	
Netherlands	12	26	
Nordic countries	18	200	43
Republic of Korea	12		
Singapore	7		

Source: UNCTAD

18. The impetus behind eco-labelling schemes in developed and developing countries may be different. While in both groups improving the local environment is the primary consideration, it is conceivable that other interests, particularly trade interests, may also be important. In developing countries, where the domestic market for eco-labelled products is likely to be small, eco-labelling schemes may be more outward-oriented. This is evidenced by the fact that eco-labelling schemes in developing countries often use the criteria developed in the OECD schemes, adapting them to their local environmental problems.

19. In general, industry as well as governments are involved in eco-labelling programmes. The level of government involvement, however, varies widely from programme to programme, for example in terms of the provision of public funding, government participation in eco-labelling boards, and the extent to which government approval of eco-labelling criteria is needed. Canada's Environmental Choice is run by a government agency and the programme of the European Union (EU) was established by a EU regulation.[7] The Green Seal programme of the Unites States, on the contrary, operates at arm's length from the national Government.[8]

20. The extent of government involvement in eco-labelling schemes may be important in the context of their accountability to international trade rules. For example, whether the eco-labelling body should be treated as a central government body or a non-governmental standardizing body has to be determined on a case-by-case basis. It may be possible to argue that, even in cases where the schemes are private, the provisions of the GATT/WTO Agreement on Technical Barriers to Trade request countries to make at least "their best endeavours" to see that non-governmental bodies adhere to procedures adopted under conformity

assessment systems. In addition, government procurement guidelines now normally include environmental considerations and may suggest an implicit or explicit preference for eco-labelled products. It is possible that the greater the degree of government involvement the greater will be the preference for eco-labelled goods in government procurement schemes.

Box 4
Principal environmental aspects focused on in the German and Japanese eco-labelling programmes

The German Blue Angel programme focuses on the following dominant environmental factors:

- Resource conservation: e.g. energy-saving consumer products
- Reduction of pollution emissions (air, water, soil): e.g. low-pollutant coatings, environment-friendly detergents
- Reduction of noise emissions: e.g. low-noise machinery
- Waste elimination,, waste reduction, waste reutilization: e.g. recycled paper, products made from recycled plastics
- Reduction of hazardous substances, e.g. mercury-free batteries

Most of the products bearing the Japanese EcoMark seem to respect the following criteria:

- Recyclable: the ability to recycle a product within the local community.
- Recycled: products that contain post-consumer waste.
- Degradable, biodegradable: products that are broken down into harmless elements by microorganisms.
- Ozone-friendly: products using chemicals that do not deplete the ozone layer.
- Compostable: the decomposition of organic matter into useful fertilizer.
- Environment-friendly: attention is being drawn to some specific environmental attribute, e.g. organic solvent-free paint or non-bleached coffee filters.

Sources:
Iba, M., 1993, "Japanese environmental policies and trade policies: trade opportunities for developing countries". Study undertaken under the UNCTAD/UNDP project "Reconciliation of environmental and trade policies"

Germany: Federal Environmental Agency, Information sheet on the "Environmental Label", undated.

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21. The extent of industry involvement varies according to the schemes, but is more or less uniformly high. This is because eco-labelling, being a market-oriented instrument, will be successful only if manufacturers' response is significant. Manufacturers are involved in the selection of product categories, in determining the criteria and thresholds for eco-labelling and in the boards or juries which decide upon the criteria. It is likely that manufacturers will propose products if eco-labelling is likely to provide them with increased market shares, and this may at times go against the interests of exporters. This issue has, however, been investigated in greater detail under the trade effects of eco-labelling.

22. Although life cycle analysis (LCA) may, in principle, be a useful instrument from an environmental point of view, it may raise practical and conceptual problems, particularly when international trade is involved. The principle of most eco-labelling programmes, even though they may differ in detail, is that the initial analysis identifies qualitatively the most important environmental impacts throughout a product's lifecycle. For example, in the case of the programmes of the Netherlands and the European Union, the most relevant environmental aspects are first identified on the basis of a matrix which considers a list of environmental aspects at different stages of the product's life cycle (see box 5 as well as annex II). Specific criteria are then developed addressing these aspects. The selection of these aspects involves a choice which may reflect a bias in favour of domestic environmental and production conditions, and ignore the environmental realities of the producing country. In other programmes, product-specific award criteria tend to focus on the use and disposal stages of a product's life cycle (for example, see box 5).

Box 5
Application of life-cycle analysis in different eco-labelling programmes

European Union	An 8x5 indicative assessment matrix is used, considering 8 environmental fields during 5 stages of the product life cycle, to identify significant environmental aspects. The environmental fields are: waste relevance soil pollution and degradation water contamination air contamination noise consumption of energy consumption of natural resources effects on eco-systems.
France	A full quantitative LCA is used, requiring extensive data gathering, analysis, resources and time.
Germany	Although the basic criteria for the award of the label are that the product's environmental soundness must be assessed on the basis of its entire life cycle, product specific award criteria, which focus on one specific environmental aspect, normally relate to the consumption and disposal phase.
Netherlands	A 25x5 matrix considering 25 types of environmental aspects (grouped under 8 broader types of environmental effects) during 5 stages of the lifecycle is used to identify significant environmental aspects for which criteria might be established (see annex II).

Source: UNCTAD secretariat

23. Comparing the different types of environmental effects associated with the product's life cycle is very difficult to do in a comprehensive manner. For instance it is difficult to compare a product which uses an energy- intensive production process but emits few pollutants with a similar product which uses less

energy in its production process but emits more pollutants. Thus in practice, there is no general agreement on how to weigh different types of environmental degradation, or on a procedure for evaluating the overall environmental impact of a product. Moreover, using LCA requires a large amount of information and may imply that criteria are developed addressing the production phase of a product. The use of criteria based on process and production methods (PPMs) involves several practical as well as conceptual difficulties, particularly for traded products (see below).

Process and production methods (PPMs)

24. One issue that arises is whether the application of PPM-based criteria to imported products is necessary and effective in achieving the objectives of eco-labelling programmes. As these programmes are based on the production conditions, values, preferences and judgements in the importing country, it may be difficult to gauge their relevance to the conditions of the exporting country. In the GATT Working Group on Environmental Measures and International Trade (EMIT), it has been mentioned that eco-labelling criteria based on PPMs "which are put in place using a single formula may prove particularly difficult, and even environmentally inappropriate, for overseas suppliers to meet".[9] An additional issue that arises is how producers selling in a number of countries with different programmes that set out different process requirements can meet them all.

25. When eco-labelling criteria address intrinsically local environmental problems, it may at times be possible to exempt foreign producers from the requirement to comply with specific process-related criteria. For example, in the framework of the criteria set up for footwear, the Netherlands eco-labelling programme, under certain conditions, exempts foreign producers from the requirement to recycle industrial chrome wastes. However, possibilities for outright exemptions may be limited because the credibility of eco-labelling may then be questioned by environmental groups. In addition, producers in the importing country may allege that a competitive advantage is provided to foreign producers.

26. The rationale for using PPM-based criteria has to be examined in greater detail. The criteria relating to PPMs may be of two types: (i) PPM regulations of the importing country are used as a basis for setting criteria with which both domestically produced and imported products should comply in order to qualify for the eco-label; (ii) criteria may set limiting values which do not relate to national regulation in either the importing or the exporting country. With regard to (i), some eco-labelling programmes recognize that foreign producers should not be required to comply with PPM-based <u>regulations</u> in the importing country.[10] Thus, where eco-labelling criteria are based on compliance with PPM regulations, the test of regulatory compliance should be related only to environmental regulations in the country where the product is produced. For example, the Environmental Choice Programme (ECP) of Canada includes compliance with "all applicable governmental and industrial safety and performance standards" (including environmental) under its general requirements, but it is understood that imported products should meet the <u>local</u> PPM-related standards in the country of production, not the Canadian regulatory process standards.[11] In fact, ECP relies solely on the attestation of the chief executive officer of the licensee that all pertinent standards have been met.[12] This recognizes the fact that eco-labelling systems may have to accept variations in PPM-based criteria across countries in accordance with carrying capacities and social preferences.

27. In the case of other programmes, however, PPM-related criteria explicitly refer to domestic regulations in the importing country[13] or are derived from such regulations.[14] Since the environmental regulations of the importing country may not be the most appropriate for the producing country, in both cases it may be preferable to focus on compliance with the environmental regulations in the country where the product is produced. For example, a number of developing and developed countries have enacted domestic regulations limiting the chemical oxygen

demand (COD) of waste water.[15] Therefore if ecocriteria set limits to COD in waste water, then it may be argued that compliance with the regulations of the producing country should be acceptable to the importing country.[16] This solution for PPM-based criteria is not substantially different from that of the Canadian ECP mentioned above.

28. With regard to (ii), criteria on environmental impacts are not addressed by existing regulations in either the importing or the exporting country. Examples can be found among criteria related to sustainable development such as the use of non-renewable sources of energy, e.g. fossil fuels, or other natural resources. It is in these cases, where there are no regulations to serve as a point of reference, that the use of PPM-based criteria for traded products may be particularly difficult. Exceptions may at times be a feasible solution. Alternatively, environmental equivalencies would have to be established in order to give equal consideration to environmental improvements being undertaken in the producing country. The sections on equivalencies and mutual recognition below provide some suggestions for dealing with such PPM-related criteria.

29. Since PPM based criteria in eco-labelling tend to create significant problems in the context of international trade, it might be useful to give priority to single issue labels which focus on use and disposal phases of the product. The use of such labels might be more objective, particularly in the treatment of traded products. Alternatively, it has been suggested that the life-cycle analysis of a product could be split into two stages: "cradle to export-border", and "import-border to grave". While eco-labelling criteria for the import-border to grave stage would be based on the priorities of the importing country, the criteria developed for the cradle to export-border stage could be set in accordance with the environmental conditions and priorities of the producing/exporting country.

C. Trade and competitiveness effects

30. In addition to PPM-related issues, the trade effects of eco-labelling are related basically to (i) possible discrimination against foreign producers; and (ii) the costs of compliance with eco-labelling criteria. De facto discrimination may compound the effects on competitiveness arising from the costs of compliance with eco-labelling criteria.

Possible discriminatory effects

31. Although the criteria for granting labels are the same for domestic and foreign suppliers, certain administrative procedures, such as plant inspection, may in practice imply differences in treatment. Domestic producers can more easily influence the development and implementation of national eco-labelling programmes than can foreign producers. In addition, the cradle-to-grave approach, which considers, among other things, production processes and methods as well as raw material use, may in practice discriminate against developing countries.

32. The selection of product categories may be more easily guided by industry's interests and consumer requirements in the importing country as they participate in the process of product selection while foreign firms do not. The majority of proposals for new product categories seems to come from domestic industry. For example, in Canada and Germany more than 70 per cent of such proposals were made by domestic industry. One concern of foreign producers is that the selection of product categories may be so narrow as to exclude products in which they are competitive. On the other hand, developing country producers of tropical timber have argued that eco-labelling programmes for timber should cover not only tropical timber, but also non-tropical timber.

33. The determination of criteria and thresholds may favour domestically produced products over imports. The fact that eco-labelling programmes focus on domestic environmental conditions and priorities implies that criteria may be biased in favour of domestic producers. Limit values can be established at a level which either intentionally or unintentionally exclude imported products. Certain criteria may be difficult for foreign producers to comply with. For example, eco-labelling criteria focusing on the use of recycled materials may create problems for foreign producers.[17] In the case of a European Union eco-label for tissue products, Brazilian exporters have alleged that the emphasis on recycling in determining whether the criteria regarding the consumption of renewable resources are met discriminated against Brazilian producers who use wood from plantation forestry for manufacture.[18] Criteria based on energy consumption may involve a number of problems for foreign producers.[19] In the same tissue products case, Brazilian producers also alleged that calculations which are made to determine whether the criteria regarding the consumption of non-renewable energy resources are met, de facto discriminated against Brazilian producers, who depend largely on hydro-electricity.[20]

Compliance costs and export competitiveness of developing country producers

34. The effects of eco-labelling on export competitiveness and market access are briefly analysed in document TD/B/41/(1)/4. Eco-labelling promotes product differentiation on the basis of environmental quality and thus may have effects on competitiveness. Since eco-labelling is voluntary, exporting firms have the option of either applying for the label or competing on the market for unlabelled products (focusing competitiveness on price factors). However, for certain product categories, exporters may be compelled to obtain a label or find themselves losing market shares. Thus, when eco-labelling is an important factor in the market place, its effects may be similar to those of mandatory regulations. In such cases eco-labelling involves market access questions, in particular when it is perceived to discriminate against foreign producers and there is some kind of government involvement in developing a label.

35. The importance of eco-labels in the marketplace varies considerably from product to product and depends on factors such as consumer concerns about specific environmental problems as well as producer responsiveness to eco-labelling.[21] The level of thresholds may also influence the market shares of eco-labelled products. For example, Canada's Environmental Choice set thresholds at a high level so that initially only about 20 per cent of the products in a certain category would be eligible for the eco-label.[22] In the case of other programmes, such as Japan's EcoMark, on the contrary, the criteria and thresholds are set independently of what proportion of firms can comply with the criteria, and a larger proportion of firms are thus eligible to apply for an eco-label. It is possible that developing countries may have greater difficulty in obtaining an eco-label when the criteria are set at a high level. On the other hand, setting the criteria high also implies that a significant portion of the market will necessarily consist of unlabelled products.

36. A number of case studies, prepared under UNCTAD's technical cooperation project sponsored by IDRC, provide a preliminary indication of some of the possible trade effects of eco-labelling in product categories which are of export interest to developing countries, in particular textiles and footwear. These studies were based on interviews with producers and relevant institutions.[23] For analytical convenience, possible impacts of eco-labelling schemes on the competitiveness of developing countries are classified in four broad categories. These are not meant to be exhaustive, but are illustrative of the kind of competitiveness impacts that may arise. These broad categories include:

- Costs of raw materials;
- Capital costs;
- Costs of testing and verification;
- Special case of small firms.

Costs of raw materials

37. Eco-labelling criteria may prescribe the use of certain chemicals or raw materials or require information concerning such raw materials. Developing country producers may face difficulties when the required raw materials are costly or not available in the domestic market. For example, some producers interviewed in Brazil considered that it would be difficult to obtain certain chemicals prescribed in the draft European Union eco-labelling criteria for textiles and to ascertain the environmental characteristics of chemicals used. While certain large-scale producers may be able to obtain their raw materials from specialized firms or to influence the processes used by their suppliers, this will normally be difficult for smaller firms.[24] Similarly, Indian producers feared that it would be difficult to obtain dyestuffs required by the criteria for footwear in the Netherlands.[25] In some cases, meeting the eco-criteria would necessitate the replacement of domestic raw materials by imported ones and would normally result in an increase in costs.[26] For example, to comply with eco-criteria of a German label MST/MUT (Marke schadstoffengeprüfter Textilien/ Marke umweltverträglicher Textilien) on textiles, some Colombian firms would have to import expensive dyes and substitutes for formaldehyde; similarly low limiting values of lead are difficult to meet.[27] Turkish manufacturers complain that the cost of obtaining organic or ecologically acceptable cotton is about 4 to 5 times that of normal cotton. This includes the costs of verification and testing.

38. Certain producers in developing countries are somewhat sceptical of the environmental improvements achievable by the use of such raw materials and are concerned whether there is a scientific justification for such requirements. Moreover, since raw materials are a recurrent cost, they see an increase in running costs which may reduce their profit margins or eliminate them altogether.

Capital costs

39. Developing country producers may have to incur large capital costs to adjust to the eco-labelling requirements, and the required technology may not be available. A relatively high share of new investments by certain large-scale producers of textiles in Brazil is reported to be linked with environmental requirements of overseas buyers.[28] In Colombia some managers said that meeting eco-criteria would necessitate the import of new technology, in particular for the treatment of waste water.[29] In addition, capital costs could increase because of the need for information and checking at every stage of production. A survey of Indian companies indicated that firms may be compelled to integrate backwards if they are to comply with the eco-criteria for textiles. Otherwise they may not be able to obtain reliable supplies.[30]

Costs of testing and verification

40. Plant inspection may be costly for developing country producers and pose particular problems for small firms. In the case of the eco-criteria for textiles, for instance, Colombian producers feared that compliance would be difficult to prove without involving costly visits by European inspectors.[31]

41. In a study carried out in India, it was reported that for some firms the costs of testing the product in order to comply with the requirements of the Netherlands eco-label for footwear could lead to a cost increase of approximately 50 percent.[32] In several cases the requisite technology may not be available for testing the product, even in OECD countries. For instance it is difficult to test whether a product contains 5 parts per million of pentachlorophenol, or whether a product is 50 per cent recycled. In these cases plant level certification has to be relied upon, and this kind of certification may not be possible or credible.

Box 6
Testing and certification procedures in different eco-labelling programmes

Canada: The eco-logo is granted by the Ministry of the Environment. The process of verification is carried out by the Ministry, which appoints a competent technical agency to do the job. Under the terms of the contract, the agency's inspectors may at any time return unannounced during the licence period to verify continued compliance with the criteria. The applicant must normally pay for the testing costs, as well as a certification fee which covers the costs of plant visits, surprise tests, etc.

European Union: The "competent bodies" (the body or bodies designated by each member State as responsible for implementing the EU eco-labelling programme) in the member State where the product is manufactured or first marketed (in case of imports: into which the product is first imported from a third country) assesses whether the product complies with the criteria. For this purpose, all required certification and documents (including the results of independent testing) must be presented to the competent body.

France: Testing is primarily done by outside agencies. Authorized testing agencies are either agencies accredited by the RNE (Réseau national d'essais) or agencies recognized by AFNOR (Association française des normalisation).

Germany: The procedure to be followed is specified in detail in the "award criteria" for each product group. Depending on the requirements for reliable demonstration of compliance, a binding declaration by the manufacturer to that effect is in general sufficient; in other cases, additional, neutral expert opinions, containing precise information on the chemical composition, or other specific proof, must be submitted

Netherlands: The decision lies entirely with the certification institute. Testing and certification procedures can be discussed on a case-by-case basis, and depend on the product category and the information that the manufacturer is able to provide. Certification institutes tend to prefer outside laboratories, since it is felt that the manufacturer's own laboratory may be biased.

Nordic countries: As a rule products are tested. Testing is done by an independent testing institute. For imported products testing can be done in the country of origin, if the certifying institute is recognized by the standards association in the country of import (e.g. institutes registered in accordance with ISO or other institutes, on a case-by-case basis).

Source: UNCTAD, on the basis of various sources.

Special case of small firms

42. A number of investments which would be required to comply with eco-labelling criteria may not be economical on a small scale. Examples are installations for recycling of industrial waste or waste water treatment. In addition, the problems arising in verification and certification may be multiplied where small-scale plants are concerned and may de facto exclude small-scale producers. Increased capital costs as well as the increased risks involved in export transactions may

also have a significant impact on the competitiveness of small-scale producers in developing countries. A study on Brazil noted that a substantial difference exists between the capacity of large-scale and small-scale sectors to comply with the draft criteria required by the EU for its label on textiles. This was particularly the case for process-related criteria which require substantial investment in machinery. Problems may also exist with regard to raw materials. Environment-friendly dyes, for example, may lie beyond the capacity of most small companies. While large-scale producers are able to source their raw materials more efficiently and influence dyestuff factories to produce environment-friendly dyes, the capacity of small-scale producers to introduce environment-friendly dyes and processes is limited. Lack of information and the costs involved may be major bottlenecks for small companies to meet the eco-criteria. While plant inspection would be a problem for all foreign producers, big or small, it is unlikely that small firms would be able to pay for the on-site plant checks required by eco-labelling schemes in several OECD countries.

D. Taking account of developing countries' interests

43. The preceding sections have indicated that eco-labelling programmes have raised concerns among developing country producers. From a trade point of view, there is concern that eco-labelling may adversely affect export competitiveness and act as a non-tariff barrier to trade. From an environmental point of view, there is concern that eco-labelling criteria which address local environmental problems and priorities of the industrialized countries may be irrelevant or inappropriate for other countries, but especially so for developing countries.

44. Taking account of the interests of developing countries in the development of eco-labelling programmes will in the first place require improved transparency as well as the association of developing countries with the process of determining criteria for products of export interest to them. The establishment of international guidelines on eco-labelling, and the acceptance by industrialized countries of different but "equivalent" environmental criteria which take account of the environmental conditions in developing countries, as well as mutual recognition could also serve developing countries' interests. These issues are examined below.

1. Transparency

45. Transparency is a basic condition for taking into account the interest of developing countries in the elaboration of eco-labelling criteria. Transparency is a broad concept, involving an enumeration of the environmental objectives and scientific principles, early notification of new product categories, ability to comment on draft criteria and publication. Transparency also may require appropriate participation of all stakeholders in the determination of criteria and thresholds. The May 1994 draft of the guidelines under discussion in ISO recognizes the importance of broad transparency. For example, transparency would require that the labelling process and methodology must be understandable; and that stakeholders should be in a position to evaluate and compare eco-labelling programmes in terms of scientific principles, relevance and overall validity.

46. Increased transparency requires actions at both the national and international levels. This section provides (i) a description of transparency provisions in the Agreement on Technical Barriers to Trade negotiated in the Uruguay Round, which could provide a basis for increased transparency at the international level; and (ii) examples of relevant initiatives in the context of individual eco-labelling programmes.

The GATT transparency provisions

47. An important aspect of transparency in the context of international trade is the notification of draft criteria with a view to providing trading partners with an opportunity to comment. In this context, the notification provisions of the GATT Agreement on Technical Barriers to Trade have proven to be very useful. So far, however, little use has been made of the GATT notification provisions in the context of eco-labelling.[33]

48. The new TBT Agreement, negotiated in the Uruguay Round, includes a number of provisions which may provide a basis for increased transparency. The TBT Agreement states that signatories shall ensure that their central government standardization bodies accept and comply with the "Code of Good Practice for the Preparation, Adoption and Application of Standards" while, if standards are developed by local government or non-governmental standardization bodies, signatories are requested to exhort these bodies to adhere to the Code (Article 4.1). The Code contains a number of commitments among which are the following:

(a) At least once every six months, a work programme must be published containing the standards under preparation and the standards which have been adopted in the preceding period. The work programme must be notified to the ISO/IEC Information Centre (provision J).

(b) Before adopting a standard, a period of at least 60 days should be allowed for the submission of comments by interested parties (provision L).

(c) The comments have to be taken into account in the further processing of the standards (provision N).

49. Another useful feature of the TBT Agreement is the "enquiry points", which answer enquiries from other countries and provide relevant documents (Article 10). Enquiry points could provide information on eco-labelling or bring the possibility of obtaining such information from eco-labelling agencies to the attention of other signatories of the TBT Agreement.

Transparency provisions in individual eco-labelling programmes

50. Eco-labelling processes are generally open to public participation. Various interest groups participate in the relevant bodies but such participation is normally limited to domestic interest groups. Foreign producers normally are not able to participate directly in the stages of product selection and formulation of criteria.[34] Foreign producers thus have to rely on the public review process to present their views and concerns.

51. The ability of foreign producers to participate in the review process depends on many factors, such as the timely dissemination of information on new product categories being selected for eco-labelling, the length of the review process and the ability to be physically present and to devote time to the process.

52. Little attention may have been given in the past to facilitating the involvement of foreign producers in the process. Eco-labelling has normally been considered an instrument of domestic environmental policy and has not been perceived as having significant trade effects.

53. In the European Union, consultation with interest groups takes place within a consultation forum.[35] The European Commission has recently published "Procedural guidelines for the establishment of product groups and ecological criteria" which address, inter alia, the issue of foreign producers' access to information and their ability to submit their views. "The procedures should ensure that third

country producers have access through the Consultation Forum to the same information available to European Union producers and be able to submit their point of view. The Lead Competent Body[36] should ensure that data and comments from the third countries producers are duly considered. To facilitate access by third countries producers, the Commission will publish periodically a list of product groups for which work is about to begin" (paragraph V.8). The guidelines specify that in order to get information and to provide their views on the eco-criteria which are under discussion, foreign producers could contact the consultation forum.

Suggestions for improved transparency

54. Whenever possible eco-labelling agencies could take advantage of the experience of the TBT Agreement. Adherence of eco-labelling agencies to the Code of Good Conduct would be useful. Governments could encourage eco-labelling agencies to do so, in accordance with Article 4.1 of the TBT Agreement. Developing countries should also raise their concerns in the context of TBT and participate in the ensuing consultative process.

55. Special transparency measures, which could involve participation of developing countries in the elaboration of criteria and thresholds, may be required when products of special export interest to them are considered for eco-labelling. It may be possible to establish basic parameters to determine when such measures should be taken, for example based on developing countries' participation in market or import shares.[37] In order to complement such parameters, developing countries could draw up a list of products of special export interest to them, the idea being that such product categories should not be selected for eco-labelling without appropriate association of developing countries in the process.

2. Guidelines

56. Internationally agreed guidelines could be developed, outlining broad principles that eco-labelling schemes could adhere to on a voluntary basis, with a view to achieving environmental purposes while avoiding de facto discrimination and undue impacts on trade. International guidelines would also provide guidance to countries wishing to develop eco-labelling programmes. Adherence to a set of principles by different programmes could eventually facilitate mutual recognition.

57. ISO is preparing international guidelines for environmental labelling. Drafting of "Goals and principles of all environmental labelling" is under way in ISO TC 207/SC3/WG3, while WG1 is in charge of developing "Guiding principles, practices, criteria and certification procedures for eco-labelling programmes of type 1". ISO hopes to have the draft guidelines ready for comment towards the end of 1994. These guidelines are particularly relevant for the work undertaken by the Ad Hoc Working Group, for example with regard to transparency and non-discriminatory labelling. However, it appears that ISO has not yet dealt comprehensively with process-related criteria (PPMs).

3. Equivalencies

58. As mentioned earlier, establishing the equivalency of eco-labelling criteria may be a useful way of dealing with developing country concerns. The concept of equivalencies in the context of eco-labelling implies that when comparable environmental objectives can be achieved in different ways, taking into account the specific environmental conditions of each country, different criteria can be accepted as a basis for awarding eco-labels. The concept could be applied in two different circumstances. Firstly, the eco-labelling programme of the importing country might accept compliance with certain environmental requirements or the achievement of certain environmental improvements in the exporting country as "equivalent" to compliance with specific criteria and thresholds established in its own programme, even when no eco-labelling programme exists in the exporting

country. Secondly, the concept of "equivalent" standards is generally considered as a basic condition for mutual recognition of eco-labelling programmes (see below).

59. When discussing equivalencies it may be useful to make a distinction between product-related and process-related criteria. Product-related criteria address environmental impacts of a product on the environment of the importing country, associated with its consumption and disposal phase. Possibilities for establishing "equivalent" product-related criteria may be relatively limited, compared to the case of PPM-related criteria. Since the domestic environment of the importing country would not be affected by PPMs addressing intrinsically local environmental problems in the exporting country, there could be extra scope for accepting as equivalent environmental criteria which better reflect the environmental conditions and priorities in the exporting country.

60. As discussed in the section above on PPMs, where environmental aspects are addressed through regulatory approaches, compliance with the exporting country's domestic regulation could be considered as equivalent to compliance with the regulation in the importing country. It has been argued that where non-regulatory PPM-related criteria are used to define environmentally superior products, for specific process-related criteria addressing intrinsically local environmental problems in the producing country, the eco-labelling programme of the importing country might accept as equivalent, PPMs which are friendly to the domestic environment of the producing country, taking into account its own environmental and developmental conditions.[38]

61. In a life-cycle analysis, equivalencies may also exist between product- and process-related criteria. For example, if the issue at stake is waste generation, the volume and type of waste generated during production could be weighed against the recyclability and biodegradability of the product after disposal.

62. Current experience with the concept of equivalencies is limited to the area of product measures. References to "equivalent" standards can be found in the Agreement on Technical Barriers to Trade and in the Agreement on Sanitary and Phytosanitary Measures, negotiated in the Uruguay Round.[39] These references seem to recognize that certain "objectives" or "appropriate levels of protection" may be achieved by different, but "equivalent" standards.[40]

63. While references to equivalencies and mutual recognition in the area of product standards can be found in GATT and ISO, little experience exists in the area of process standards. The GATT Agreements would not cover PPMs unless they have an impact on the product, and the working draft of the ISO guidelines appears to exclude a comprehensive reference to PPMs. Nevertheless, PPMs are important in the context of certain eco-labelling programmes and of key concern to developing countries. Innovative thinking on equivalencies may be required.

64. A key issue is how to select comparable environmental criteria which are relevant and measurable. Examples involving principally PPM-related environmental criteria can be found in the following areas:[41]

(a) Energy consumption: method of energy production, e.g. fossil-fuel-based energy production versus hydroelectric power;

(b) Waste generation: volume and type of waste generated during production (definition of hazardous waste);

(c) In the case of pulp and paper: recycled content versus "environment-friendliness" if virgin wood is used for manufacture:

4. Mutual recognition

65. The basic idea of mutual recognition is to recognize the validity of divergent environmental criteria and also to ensure that trade interests are not unduly affected by this diversity. The interest in mutual recognition of eco-labelling has been growing, partly as a result of concerns that the emergence of different eco-labelling programmes in an increasing number of countries might adversely affect trade as well as create confusion among consumers. Mutual recognition, however, is not yet widely accepted. Environmental groups may be concerned that mutual recognition could imply that products that do not meet the same stringent criteria of the domestic programme are nevertheless awarded the corresponding eco-label. Domestic producers may be concerned about possible effects on competitiveness. Mutual recognition requires a confidence building process. Acceptance by consumers and environmental interest groups requires credibility of the exporting country's programme. A basic condition for mutual recognition is that criteria are "equivalent".

66. Mutual recognition in the context of eco-labelling generally would imply that, if certain conditions are met, qualification for the eco-label of the exporting country is accepted as a basis for awarding the eco-label used in the importing country. Mutual recognition would normally apply to identical or similar product categories.

67. It has been mentioned, however, that reciprocity or mutual recognition, based on some type of international agreement, could take several forms. The eco-labelling programme of the importing country could, by way of example, agree to award its own eco-label to products which:[42]

(a) meet the criteria of the eco-label of the exporting country;

(b) meet the PPM-related criteria of the eco-label of the exporting country, and the use and disposal criteria of the eco-label of the importing country (as certified by the exporting country's programme); or

(c) are certified by the exporting country's programme against the requirements of the importing country's programme.

68. The first form of mutual recognition implies that a product that qualifies for the eco-label of the exporting country would automatically qualify for the eco-label used in the importing country.[43]

69. The second option for mutual recognition reflects the point made in previous sections that PPM-related criteria should, as far as possible, take account of the environmental conditions of the producing or exporting countries. To the extent that criteria are PPM-related, the product would thus be entitled to the label of the importing country on the basis of the certification by the eco-labelling agency in the exporting country that the product complies with the PPM criteria of its own scheme.

70. The third form of mutual recognition implies recognition of testing and verification bodies. In this context, Article 6 of the TBT Agreement, on Recognition of Conformity Assessment by Central Government Bodies, could form a basis for discussion. [44]

71. Mutual recognition tends to be easier between countries which have comparable levels of development and which are already involved in other kinds of trade arrangements. In fact, the few proposals for mutual recognition of eco-labelling schemes which have been formally discussed so far involve, on the one hand, the European Union and the EFTA countries and, on the other, the United States and Canada. In addition, the present experience is limited to certain aspects of eco-labelling such as conformity assessment procedures.

72. Mutual recognition of eco-labelling programmes implemented by countries at different levels of economic development may involve programmes which vary more substantially from each other in terms of environmental criteria. Mutual confidence, based on the previous harmonization of technical requirements, such as testing and inspection methods, would be a prerequisite for mutual recognition. Work on internationally agreed guidelines for eco-labelling could also contribute to creating conditions for moving towards mutual recognition of eco-labels.

73. It should be noted, however, that eco-labelling programmes in developing countries and countries in transition are often drawn up in the light of existing programmes in the OECD countries, even though their exact scope and nature may respond to specific domestic needs.[45] For example, the Polish "Eco-Logo" will eventually be largely based on the environmental standards and criteria set in the European Union. Criteria for eco-labels under the EcoMark programme in the Republic of Korea in general have been adapted from the German Blue Angel, the Japanese Ecomark, or the Canadian ECP, as appropriate.[46] The criteria established for some product categories by the Indian Ecomark have also been adapted from the Canadian ECP. The fact that the eco-labelling programmes in developing countries tend to build on the experience of the programmes in the industrialized countries strengthens the case for the mutual recognition of programmes.

5. Technical assistance

74. In a number of ways, technical assistance by international standardization bodies and national eco-labelling agencies can help reduce the cost of obtaining a label. Training the standardization bodies in the developing countries to conduct on-site plant testing and verification should be encouraged. This would obviate the need for testing by eco-labelling agencies in the importing countries. Training can also be conducted through international standardization bodies such as ISO. Greater coordination between standardization institutes is in any case desirable as this will facilitate the development of credible eco-labelling systems and the eventual mutual recognition of systems. Eco-labelling agencies and institutions in OECD countries could provide technical assistance to emerging schemes in developing countries, which would enable them to learn from the mistakes made by the earlier schemes and thus implement more effective systems.

II. DEFINING AND CERTIFYING "ENVIRONMENT-FRIENDLY" PRODUCTS

75. The previous chapter examined one specific type of environmental labelling: eco-labelling, which has been defined as the award of a label by a third party to products which are relatively more "environment-friendly" than others in the same category, on the basis of preset criteria (normally there is also a certain degree of government involvement). However, eco-labelling is normally not used in product categories which as a whole have little environmental impact, e.g. bicycles.[47] Also, product categories such as food, beverages and pharmaceuticals are often excluded from eco-labelling, because there are several other operative quality standards for such products which may also incorporate environmental characteristics. Moreover, even for product categories which might be considered for eco-labelling, other mechanisms, such as the manufacturer's declaration or endorsement by an NGO, are being used to market products on the basis of their environmental attributes.

76. This part of the report deals with the question of how "environment-friendly" products not covered by eco-labelling are promoted on the basis of environmental claims, with certification issues and with possibilities for improving the trading opportunities in developing countries. This analysis complements work undertaken by the Standing Committee on Commodities, which is trying to identify means by which the competitiveness of natural products with environmental advantages could be improved. In a recent report by the secretariat to the Standing Committee, which is being made available to the AHWG, three groups of natural products are identified:[48]

(a) products with relatively established markets, such as biomass fuels and organically grown products;

(b) products with environmental advantages which have considerable potential but the markets for which are not sufficiently developed, particularly natural substitutes for chemical products which are inputs in industrial production;

(c) "niche" products such as non-wood forest products and natural inputs into agriculture.

77. This report covers a wider range of products, including manufactured products. There are numerous ways to market such products on the basis of environmental claims. In part eco-labelling has been a response to the boom in "green marketing" and the scepticism regarding the reliability of environmental claims. In order to protect the consumer, the environment and fair competition, environmental claims must be "truthful and non-deceptive, meaningful and relevant".[49] Thus, it is necessary to examine whether the environmental attributes, on the basis of which a product is claimed to be "environment-friendly", are meaningful. This implies defining "environment-friendly products" (EFPs). In addition, for a claim to be truthful it will normally be necessary to certify that a product indeed possesses the characteristics of an EFP, unless a whole product category is "environment-friendly".[50] Finally, it is necessary to examine ways and means to promote exports of EFPs by developing countries. These issues are examined below.

A. Defining "environment-friendly" products

78. In theory, EFPs could be broadly defined as products whose manufacture, use, and disposal place a reduced burden on the environment.[51] But there is no rigid formula or decision heirarchy for defining what consitutes an EFP. Products which are environment-friendly in one context may be less so in another context or geographical location. Moreover, it may be difficult to trade off one environmental attribute for another, e.g products which reduce waste versus products which discharge lower levels of chemical solvents. This implies that choices have to be made.

79. According to the United Stated Office of Technology Assessment, what is an EFP depends strongly on the context in which the product is manufactured or used.[52] For example, by giving designers incentives to consider the environmental impacts of their choices, environmental problems can be addressed throughout the product life-cycle.[53] While some environmental objectives are universal and apply to a large number of products (e.g. avoiding the use of CFCs), in general the choice of EFPs is specific to the classes of products or production networks which are operative within a particular local context. For example, factors such as the length of product life; product performance, safety, and reliability; toxicity of constituents and available substitutes; specific waste management technologies; and the local conditions under which the product is used and disposed of may all be used to claim that a particular product is an EFP.

80. It should also be noted that environmental characteristics cannot be seen in isolation of other aspects of the product, such as quality and safety. To the extent that the focus of EFPs appears to be on characteristics such as greater durability and energy efficiency, there does not appear to be a contradiction between general quality aspects of a product and its environmental characteristics. In fact many good quality products according to these characteristics would also qualify as EFPs. However, to the extent that performance characteristics do not go hand in hand with environmental attributes (e.g. using photodegradable plastics for car fenders which may degrade on the highway), it may be necessary to distinguish between EFPs and other performance attributes. In these cases, it is likely that only very few consumers will trade

off environmental quality with performance attributes. According to ISO "Credibility requires that the consumer is given information explaining why a product is better for the environment and how it is as suitable for use as competing products on the market. Furthermore, if an environmental label is put on a product which has inferior performance to competing products (for example, if twice as much (detergent) must be used for the same result), this difference could result in added use or dissatisfaction that could affect the credibility of labelling, the fairness of the market and perhaps even the legitimacy of the claim" (Principle 1, goal and principles of all environmental labelling, draft).

81. Another possible way of conceptualizing EFPs is on the basis of the environmental objectives and targets attached to product-specific environmental policies. For example, the Netherlands Environmental Policy Plan (NEPP) of 1989 identified the following objectives:

(a) closing of substance cycles in the chain of raw material, production, product and waste;

(b) saving of energy together with increasing efficiency and utilizing renewable energy sources;

(c) quality improvement (above quantity) of products, production processes, raw materials, waste and environment in order to prolong the usage of substances in the economic cycle.

82. Products which meet some or all of these objectives could be classified as EFPs. However, this clear stating of objectives does not resolve the problem of consumer confusion when faced with a choice between a product which uses lower levels of energy but a higher level of raw materials versus a similar product which does the reverse. It also does not offer any suggestions for closing product cycles when different stages of the life cycle of the product are carried out in different countries.[54]

83. Another possible approach in identifying EFPs focuses on the production unit rather than on the product itself. For example, products produced in an "eco-factory", a concept which is being discussed in Japan, could be regarded as EFPs. In a recent study it is mentioned that the concept of an eco-factory encompasses several aspects, including refraining from generating polluting by-products, reducing the volume of consumed and discarded waste while recycling natural resources in all stages of production, distribution, and consumption.[55] While stressing the global nature of the concept of eco-factory, it does not address the possible trade implications. It does recognize that "comprehensively determining the most effective stage at which to alleviate the global ecological burden from the stages of raw materials, use, product manufacture, waste and recycling will be quite difficult..".[56]

84. The eco-factory concept analyses the trade-offs that may arise between different environmental goals. For example, the process of iron manufacture causes an environmental burden, but iron is easier to recycle than plastics. Plastics may be difficult to recycle, but their use in automobiles has the effect of lightening the vehicle and thus reducing the fuel consumption. Implicit in the notion of such a trade-off is that domestic production structures as well as environmental objectives will determine which environmental objectives should receive priority.

85. Similar to the notion of the eco-factory is the concept of eco-auditing in which the European Union has made significant advances. The European Union, through its Council Regulation N: 1836/93 of 29 June 1993, allows voluntary participation by companies in the industrial sector in a community eco-management and eco-audit scheme. Member States are encouraged to promote the participation of small-scale firms through the provision of technical assistance. All firms within a particular industrial site can register their names with accredited

environmental verifiers in the scheme. An industrial site has been defined by the regulation as one in which "the industrial activities under the control of a company at a given location are carried out, including any connected or associated storage of raw materials, by-products, intermediate products, and products and waste material, and any equipment and infrastructure involved in the activities, whether or not fixed".[37] ISO is also in the process of developing guidelines for eco-auditing and for eco-management within the same sub-committee as that which deals with eco-labelling. UNEP in its Cleaner Production Programme is also investigating ways in which firms can help clean their production processes and has found that several firms in developing and developed countries have been able to merge commercial and environmental interests.

86. Thus a range of products with divergent environmental claims can be classified as EFPs, provided the following caveats are understood:

(a) No product is absolutely friendly to the environment. EFPs are only relatively environment-friendly, viz. either relative to the way that they were previously produced and disposed of, or relative to other products in the same category;

(b) What constitutes an EFP also depends on locational factors;

(c) Since a product has several environmental impacts, choices may have to be made to define an EFP;

(d) The overall quality and performance of the product also plays a role.

B. The eco-certification issue

87. Because of the difficulties that arise in conceptualizing EFPs, there is also considerable misinformation regarding EFPs. Several products are spuriously claimed to be EFPs. One example is the often used claim that a product or its packaging is "recyclable". Many of the stated claims on "recyclability" may be more marketing tools than reality. For recyclability to be relevant, recycling facilities must be available. Such facilities do not exist in many areas, including the OECD countries. For example, recycling facilities for drink boxes do not exist in New York.[38] In addition, recycling requires a disciplined consumer who is able to dispose of the product or packaging in just the right container, or it requires a substantial outlay on collection and sorting.

88. Though several OECD countries have instituted "misleading advertising guidelines", these may be difficult to invoke in the case of environmental claims. One reason is that these guidelines may be too narrow and do not cover all aspects of environmental claims. Also the guidelines do not appear to have any compliance mechanisms. For example, it is contended that the Canadian Guiding Principles for Environmental Labelling and Advertising could fail to "level the playing field for companies that actually take the time, and who expend the resources to meet the guidelines, while other less responsible companies, with little effort, could still promote their so-called "green" products without meeting the requirements of the guidelines".[39]

89. Because of misleading claims and inadequate mechanisms to redress such claims the issue of eco-certification acquires greater significance. Moreover, if developing countries want to promote the exports of EFPs as part of their overall export promotion strategy, they must be able to establish their environmental claims credibly. Thus there is a need to explore credible mechanisms for certifying EFPs.

90. While there are several different variations of eco-certification, three are identified here for consideration:

(a) Advertisement or self-certification;

(b) Endorsement of a product by environmental groups or consumer groups;

(c) Third-party certification by a national or international standardizing organization.

Self certification

91. Environmental claims based on self-declarations are becoming increasingly common. Firms which are of considerable repute or large retail chains can make credible environmental claims, but small firms or others without adequate infrastructure, particularly in terms of advertising, may find it more difficult to establish themselves in the market. Developing country producers may find it particularly difficult to establish their environmental claims, largely because of the unfamiliarity of OECD country consumers with the production and product use practices in the developing countries. In these cases third-party certification becomes important.

92. ISO Working Group 2 is developing "terms and definitions for specific use in environmental labelling", for the Type II (self-declaration) category. This is in response to the huge number of environmental claims and the difficulties in verifying them have led to a loss of interest by consumers in green products. Working Group 2 has just started working on "Testing and Verification Methodologies for Application in Environmental Labelling Type II".

Endorsement

93. There are several kinds of product support extended by environmental and/or consumer organizations. These include endorsement of mainstream consumer products, such as in-house products of grocery stores and specialty products, such as organically grown products or special types of coffee.[60] Some green groups have begun to build links with companies.[61]

94. In some OECD countries, green consumer books such as The Green Consumer: Shopping for a Better World, offer guidance on and ratings of the environmental impacts of specific consumer products.[62] In addition, reports by environmental or consumer organizations may contain recommendations for specific groups of products. The latter involves assessing and reporting upon the merits of a product as to whether or not it meets certain consumer and social standards. For example, the Consumers Association of Canada tests products for durability, workability, and safety, and reports the results to the public through its magazine, Consumer Reports.

95. Companies may sponsor an environmental activity, such as reforestation, and may be able to sell products as EFPs, even though they may not by themselves be environment-friendly.

96. The other side of the coin is the NGO-sponsored boycott. By virtue of the boycott, the groups indirectly guide consumer preference towards other products considered to be more environment-friendly. Normally, boycotts become effective through consumer persuasion such as advertising and in theory these should also be subject to misleading advertising guidelines. In practice, however, it is very difficult to bring lawsuits under misleading advertising guidelines. Boycotts may or may not be backed by strong scientific evidence and thus an examination of whether and how they can be subject to scrutiny under such guidelines would be useful.

97. These forms of informal certification may influence consumer choice. The extent of their influence on consumer choice is difficult to determine, as no systematic consumer polls have been conducted. However, such product endorsements

are by no means negligible in their impact, and thus warrant closer attention.[63] Credibility will largely depend on the technical competence of the environmental groups as well as their ability to make unbiased decisions.

Third-party certification

98. Third-party certification schemes have been discussed earlier in the context of eco-labelling. Concepts such as the use of guidelines and equivalencies may also be applied to other EFPs. Standards specified for organically grown products by Codex Alimentarius provide an interesting example. In April 1993, Codex Alimentarius issued at Ottawa some guidelines which set out the principles of organic production at farm, processing, handling, storage and transport stages. Permitted inputs for soil fertilizing and conditioning, plant and animal pest and disease control, food additives and processing aids are also specified. In allowing imports labelled as organic products, countries would usually accept the inspection and certification procedures and standards which are applied in the exporting country, provided the certificate was obtained within a system of production and inspection applying equivalent rules in accordance with the guidelines.[64] Though equivalent rules have not been strictly defined, the guidelines allow equivalent rules to be determined as would be appropriate in the local context.[65]

99. Whether the same method of certification can be used for industrial products is more difficult to establish. However, for pharmaceuticals, chemicals and electronic products there already appears to be a broad consensus on what constitutes "good quality". Thus systems of equivalence and mutual recognition as described above may be easier to institute for these products.

C. Suggestions for improving trading opportunities

100. Developing countries could focus on expanding the exports of EFPs in several ways. Further work could focus on analysing the inherently environment-friendly characteristics of products exported from developing countries and their application to other kinds of widely used products. As long as environmental benefits accrue in any stage of the life cycle the product could be promoted on the basis of environmental claims. It may also be necessary to explore multiple possibilities for their use, particularly as substitutes for less environment-friendly products used for the same purpose.

101. Another idea which has come up at the firm level and can be used to promote the export of EFPs from developing countries is the concept of "product stewardship". This concept implies that firms ensure the safe environmental production, use, and disposal of the product, through the provision of technical expertise and services.[66] Thus firms in developing countries could obtain technical, marketing, and technological assistance for marketing their products in OECD countries, if they participate in the production chain of such firms which undertake "product stewardship". It could also constitute an informal form of certification of EFPs originating in developing countries to the extent that such products were sold to firms which practise "product stewardship".

102. While strategies for individual products should be specific to them, in order to promote their exports of EFPs developing countries should ensure that their certification mechanisms signal their commitment to the environment. Three types of signals could form the basis for eco-certification schemes in developing countries:

(a) product or firm-specific characteristics that signal a commitment to the environment;

(b) regulations or formalized rules governing firm behaviour with respect to the environment;

(c) the use of well-established third-party intermediaries such as ISO and Codex Alimentarius to provide a form of guarantee that an accepted environmental code of behaviour is being followed.[67]

103. Government involvement in the second, particularly with respect to enforcement, could conceivably send the right signals to the OECD country consumers and importers. With respect to the first, it may be necessary to give due recognition to firms from developing countries which have environmentally responsible management and whose practices with respect to the environment are considered exemplary. Information on their environmental management, particularly in their local context should be disseminated widely. Producer and consumer networks would be particularly beneficial in disseminating information on the environment-friendly practices of firms from developing countries. Third-party certification has already been discussed widely in the context of eco-labelling and the same precepts could be applied to EFPs which fall outside the jurisdiction of eco-labelling.

104. Boycotts of products on environmental grounds (by NGOs or other environmental bodies) should be subject to greater discipline at both the national and international levels, as they may result in trade displacements. Such trade losses would be particularly onerous for developing countries as they may not have the means to mount counter-advertisement campaigns. One example of the trade distorting effects of misleading advertising, although not related to the environment, is the case of palm oil exports from Malaysia to the United States. Cooking-oil-producing companies advertised that tropical oils were high in cholestrol. As a result Malaysian exports of palm oil declined significantly. Malaysian exporters however, spent a lot of money on countering these claims, which could only be done by counter-advertisement as the legal procedures under the misleading advertising guidelines were cumbersome.

105. Future work on EFPs could concentrate on exploring mechanisms for fostering the credibility of environmental claims by developing country exporters. In general this may require a detailed search for marketing avenues, better product information, appropriate government certification, and working through international certification bodies such as ISO. Developing countries themselves may jointly establish scientific assessment and marketing facilities, as well as testing facilities. Such regional facilities may serve to cut costs as well as help to establish credibility.

106. In conclusion, it may be possible to certify EFPs in a number of ways. The important issue will be to ascertain the credibility of the certifying mechanisms, particularly in OECD countries.

IV. CONCLUSIONS AND RECOMMENDATIONS

107. This report has shown that the different ways in which environmental aspects of products can be highlighted with a view to influencing consumer preferences in the industrialized countries may have negative or positive trade effects. Several suggestions have been made for increasing the compatibility of eco-labelling and eco-certification schemes with the trade and sustainable development interests of developing countries.

108. Although applying for an eco-label is a voluntary decision by a firm, eco-labelling may involve market access questions when the procedures for obtaining an eco-label are not transparent or discriminatory.

109. Eco-labelling may have effects on export competitiveness. For developing country producers, the costs involved in using specific chemicals and other raw materials, in capital investments, and in testing and verification tend to be particularly relevant. Designing and producing a product that complies with eco-criteria may be particularly costly for small-scale producers. In addition, process-related criteria may entail high costs for foreign producers. The

judgement of whether or not to incur additional costs in order to comply with the eco-criteria has to be made by individual firms in developing countries. However, in cases where obtaining an eco-label is a de facto condition for maintaining or increasing market shares, then eco-labelling criteria which are particularly difficult to meet or which imply high compliance costs for foreign producers will at best reduce their competitveness, and at worst deny them market access.

110. In certain aspects the possible trade effects of eco-labelling are similar to those of technical standards and regulations. The experience acquired in dealing with the trade effects of technical standards and regulations, for example through the GATT Agreement on Technical Barriers to Trade, should be used as a basis for mitigating the undue adverse trade effects of eco-labelling.

111. Eco-labelling agencies should give consideration to adhering to the Code of Good Conduct (annex 3 to the Agreement on Technical Barriers to Trade) and Governments should encourage them to do so. In addition, eco-labelling agencies may wish to ensure that their schemes are non-discriminatory and offer equal competitive opportunities to imported products.*

112. In addition, eco-labelling could have trade effects with which the international trade rules are less familiar. For example, the life-cycle approach and the use of PPM-related criteria involve complex issues, in particular when international trade is involved. These aspects of eco-labelling point to the need for a broad concept of transparency, including, for example, an enumeration of the environmental objectives and scientific principles. Transparency may also imply involving developing countries in the eco-labelling process when products of special export interest to them are concerned (see below).

113. Eco-labelling criteria based on PPMs may be particularly difficult for foreign producers to meet, and may in addition be environmentally inappropriate. Eco-labelling programmes should take account of the environmental and developmental conditions of the producing country. For products of export interest to developing countries, it may be preferable to focus on single issues which relate to the use and disposal stages of the product. Alternatively, compliance with the regulations of the producing country could be considered as a basis for awarding the eco-label. When PPM-related criteria refer to environmental effects which are not addressed by regulations, concepts such as equivalencies and mutual recognition may be effective in dealing with the PPM issue.

114. The report has examined several possibilities for taking into account the interests of developing countries in the elaboration of eco-labelling criteria. These include:

(a) Special transparency measures, which could involve <u>participation of developing countries</u> in the elaboration of criteria and thresholds, when products of special export interest to them are considered for eco-labelling. Products of special export interest to developing countries can be identified on the basis of their market or import shares, or by developing countries themselves, the idea being that such products would not be selected for eco-labelling without associating developing countries in the process.

(b) Multilaterally agreed <u>guidelines</u> could be developed, which could outline broad principles that eco-labelling schemes could adhere to on a voluntary basis. The purpose of such guidelines would be to achieve environmental objectives while avoiding discrimination against foreign producers and undue adverse effects on trade. Adherence to a set of principles could eventually facilitate the mutual recognition of eco-labelling programmes.

(c) The concept of <u>"equivalent"</u> criteria could be developed and applied with two purposes in mind. Firstly, the eco-labelling programme of the importing country might accept compliance with certain environmental requirements or the

achievement of certain environmental improvements in the exporting country as "equivalent" to compliance with specific criteria and thresholds established in its own programme, even when no eco-labelling programme exists in the exporting country. Secondly, the concept of "equivalent" standards is generally considered as a basic condition for mutual recognition.

(d) Mutual recognition of eco-labels may help to avoid or mitigate adverse effects on trade while contributing to environmental objectives in a way that takes account of differences in environmental conditions between countries. International guidelines on eco-labelling principles and the building of confidence through the accreditation of certification bodies, exchange of information, consultations and other measures may be needed to move towards mutual recognition.

115. The discussions in the AHWG could help to develop these concepts as they would apply to eco-labelling and give guidance on how they may be applied. The results of these discussions, which could focus on trade effects and developing country concerns, could provide inputs to ISO, GATT/WTO and OECD.

116. While eco-labelling is based on third-party certification against preset criteria, other mechanisms such as self-declaration or endorsement by environmental groups depend largely on the credibility of specific firms or environmental groups. Measures which limit the market access of products from developing countries on the basis of claims that they are environmentally unfriendly may be misleading, because the absolute environment-friendliness of products is difficult to establish. In this context, developing country producers may find it even more difficult to establish credibly the environment-friendliness of their products, as their production structures (informal and small-scale) and environmental priorities may be unfamiliar in the OECD countries. Thus strategies for improving the trading opportunities of their environment-friendly products should concentrate on mechanisms for establishing credible environmental claims.

117. In order to succesfully market environment-friendly products, developing countries could work at the firm, the national and at the international levels. At the firm level, this report suggests that disseminating information on their environmental practices or linking up with efforts of major firms in product stewardship may provide viable alternatives. At the national level, development and implementation of realistic environmental standards may give the right signals to OECD country markets. Third-party eco-certification, through agencies such as ISO and Codex Alimentarius, could also be used to substantiate the environmental claims being made for the products exported from developing countries.

Annex I

ONGOING WORK IN UNCTAD AND OTHER INTERNATIONAL ORGANIZATIONS

1. This annex provides information on ongoing work in other international organizations as well as on UNCTAD's joint activities and other forms of co-operation with these organizations. It is to be noted that UNCTAD participates as an observer in the WTO Committee on Trade and Environment and in the OECD joint group of trade and environment experts; and as a liaison organization in the ISO Subcommittees on Environmental Labelling (see below). This annex also provides information on ongoing and planned technical cooperation projects in UNCTAD which may be relevant for the AHWG.

A. Cooperation with other international organizations

2. Several international organizations and other bodies are trying to strengthen international cooperation in eco-labelling and eco-certification.

3. The GATT Working Group on Environmental Measures and International Trade (EMIT) has tried to clarify the trade effects of eco-labelling and to analyse whether such effects might differ from those of technical standards and regulations that are more familiar to GATT contracting parties through the Agreement on Technical Barriers to Trade. The newly created WTO Committee on Trade and Environment will continue to examine eco-labelling. The Committee will also continue to examine the transparency of environmental measures, including eco-labelling. As mentioned above, the Agreement on Technical Barriers to Trade as negotiated in the Uruguay Round includes several provisions which are relevant in the context of eco-labelling.

4. ISO, in particular its Technical Committee 207, Subcommittees 1 and 3 on Environmental Labelling, is trying to establish agreed procedures and principles to underpin current and future eco-labelling schemes, with a view to providing some basis for the schemes to move closer together[69].

5. OECD's joint group of trade and environment experts has been discussing eco-labelling for some time. Discussions have focused on issues such as life-cycle management and PPMs. The objectives of the group's analytical work are to clarify the issues, provide inputs to other forums and arrive at policy conclusions and where appropriate guidelines.

6. FAO is working on issues such as certification, labelling, pollution control, recycling, and packaging in the context of the forestry sector. It is also actively involved in the Codex Alimentarius Commission on food standards, particularly on the issue of harmonization of food standards to protect consumers' health and facilitate international trade.

7. Codex Alimentarius has developed guidelines for the production, processing, labelling and marketing of organically produced foods. The aims of these guidelines are: (1) to protect consumers against deception and fraud in the marketplace and unsubstantiated product claims; (2) to protect growers of organic produce against misrepresentation of other agricultural produce as being organic; (3) to ensure that all stages of production, processing and marketing are subject to inspection and comply with these guidelines; (4) to harmonize provisions for the production, certification, identification and labelling of organically grown produce; (5) to provide international guidelines for organic food control systems in order to facilitate recognition of national systems as equivalent for the purpose of imports.

8. Codex Alimentarius has also developed standards for conventional labels of food products, model regulations to control outrageous or unsubstantiated claims made on labels and special regulations on nutrition labels and health claims.

9. UNEP's work on eco-labelling is concentrating on mutual recognition and equivalency issues in connection with existing international environmental and related standards, as well as the preparation of policy work and research related to criteria selection and the environmental effectiveness of eco-labelling schemes. UNEP is also doing background work to assist countries in environmental criteria identification. UNEP continues to cooperate with UNCTAD in examining trade-related issues of eco-labelling (see below). Other areas of UNEP's work of relevance to eco-labelling include ongoing work on life cycle assessment methodologies; the establishment of criteria for the design of products compatible with sustainable development; sector-specific guidelines for environmental auditing and environmental impact assessment; and criteria and technical assistance related to cleaner production.

10. As part of its overall programme on environment-related trade promotion in developing countries, the International Trade Centre (ITC) has initiated a programme of work on eco-labelling, focusing on promotional and operational activities.[70] ITC is planning to provide information on trading opportunities for environment-friendly products, eco-labelling systems, criteria and procedures, and to assist developing country producers to seize trading opportunities provided by eco-labelling in their target markets. ITC is also considering providing assistance to institutions, associations and enterprises in developing countries in establishing company level labels or national level eco-labelling schemes. Work on eco-labelling is also being carried out in the Economic Commission for Europe and UNIDO[71].

11. The private sector is also involved in work related to guidelines for eco-labelling. The International Chamber of Commerce issued its first guidelines on eco-labelling in 1991. A new working party, in which the environment and marketing commissions cooperate, is currently revising the guidelines and is analysing various mechanisms to strengthen common elements and promote mutual recognition of eco-labelling schemes.

12. Finally, eco-labelling agencies themselves are coordinating efforts. At a recent meeting of eco-labelling agencies in 12 countries, a Global Eco-labelling Network (GEN) was created, as a vehicle to exchange information and enhance cooperation.

B. Cooperation with UNEP

13. The secretariats of UNEP and UNCTAD have included eco-labelling and eco-certification among the areas on which joint work is planned.[72] UNEP and UNCTAD are in the process of comparing scientific and other criteria in a number of developed and developing country eco-labelling programmes, focusing on a few product categories so as to help identify both common and different environmental criteria. Research also focuses on criteria equivalence and initiatives for internationally agreed guidelines for eco-labelling.

14. In the area of eco-labelling and eco-certification, UNCTAD and UNEP will carry out conceptual studies, case studies and other work on concepts such as mutual recognition and equivalencies, as well as the central issue of inspection, monitoring and enforcement. This work would also take account of work under way in other bodies, including ISO, the CODEX Alimentarius and GATT, as well as work at the regional level.

15. UNCTAD and UNEP are closely coordinating with other international organizations. An interagency coordination meeting was held at Geneva on 27 June 1994. The following agencies participated: FAO; GATT; ISO; IEC; ITC; UNCTAD; UNEP; UNIDO; WHO; and the World Bank.

C. UNCTAD's technical cooperation projects

16. UNCTAD's technical cooperation projects in the area of trade and environment have the following objectives: (1) to assist in increasing awareness and understanding of the complex linkages between trade, environment and development through policy-oriented studies; (2) to contribute to building institutional capacity in developing countries and countries in transition to deal with the trade and environment interface; (3) to provide information and analysis to policy makers and the business sector; (4) to support the effective participation of developing countries in deliberations in the relevant international organizations; and (5) to support a dialogue between trade, environmental and developmental communities.

17. The results of these studies are disseminated through workshops and seminars, publications and the secretariat's reports to the intergovernmental machinery. In the case of eco-labelling, support has been provided by the International Development Research Centre (IDRC) in Canada as well as the Government of the Netherlands. IDRC has supported policy analysis carried out by researchers in developing countries. In parallel with the project activities implemented by UNCTAD, IDRC has funded a study undertaken by the Centre for Trade Policy and Law of Carleton University on Canada's Environmental Choice Programme and its impacts on developing country trade. The Government of the Netherlands has supported in-house research in UNCTAD and is also supporting a study on eco-labelling in the Netherlands as well as the joint activities with UNEP outlined above.

18. Policy-oriented research so far has focused on analysing the possible effects of eco-labelling in the OECD countries on export competitivenss of developing countries. Researchers in developing countries have undertaken sectoral studies focusing on the following sectors: pulp and paper, textiles and clothing, and leather and footwear. Research has been carried out through interviews with producers, producer associations, government officals, and experts from standardizing bodies, among others. In addition, an analytical survey has been made of planned eco-labelling schemes in developing countries. A large number of papers were presented to the UNCTAD Workshop on Eco-labelling and Trade (Geneva, 28-29 June 1994), which will be published in book form. The secretariat, with the help of research institutes in developing countries, will continue to carry out sectoral studies as well as analytical work aimed at further developing possible mechanisms to increase the compatibility between the environmental objectives and eco-labelling and the trade and sustainable development interests of the developing countries.

19. Workshops organized under UNCTAD's technical cooperation projects will continue to provide an opportunity for exchanging views and disseminate information on eco-labelling and trading opportunities for environment-friendly products, as well as on the other items included in the terms of reference of the AHWG.

Annex II

ASSESSMENT MATRIX WITH POINTS OF ATTENTION FOR THE NETHERLANDS ECO-LABEL

Basic aspects	LIFE CYCLE				
Sub-aspects/environmental measures	a	b	c	d	e
Raw materials					
1. Exhaustion of scarce, renewable raw materials					
2. Exhaustion of non-renewable raw materials					
3. Total quantity of raw materials					
Energy					
4. Exhaustion of non-renewable sources of energy					
5. Total quantity of energy consumed					
Emissions					
6. Acidifying compounds					
7. Eutrophicating substances					
8. Greenhouse gases					
9. Ozone layer depleting substances					
10. Substances toxic to human beings					
11. Substances toxic to flora and fauna					
12. Waste heat					
13. Release of radiation					
Nuisance					
14. Release of stench and odour					
15. Noise nuisance for user/environs					
16. Danger of disasters					
17. Despoliation of nature/landscape					
Waste					
18. Quantity of waste before processing					
19. Quantity of waste after processing (final waste)					
20. Quantity of chemical waste					
Recyclability					
21. Recyclability of total product					
22. Recyclability of product parts					
23. Recyclability of materials					
Repairability					
24. Repairability of the product					
Life					
25. Technical life of products					

Life cycle:
a. Extraction of raw materials
b. Production of materials
c. Manufacture of products
d. Use of products
e. Waste processing

Source: Stichting Milieukeur

Notes

1. See document TD/B/40(2)/26 of 17 June 1994.

2. Reports TD/B/40(1)/6 on "Trends in the field of trade and development in the framework of international cooperation" and TD/B/41(1)/4 on "The impact of environment-related policies on export competitiveness and market access".

3. Jha, V., R. Vossenaar and S. Zarrilli, "Eco-labelling and International Trade, Preliminary Information from Seven Systems". Draft discussion paper prepared for the ISO/IEC SAGE subgroup on eco-labelling, Toronto, 27-28 May 1993; and Jha and Zarrilli, "Eco-labelling initiatives as potential barriers to trade - a viewpoint from developing countries". Paper prepared for the OECD Informal Experts Workshop on Life-Cycle Management and Trade, Paris, 20-21 July 1993.

4. UNCTAD secretariat, report of the Workshop on Eco-labelling and International Trade, Geneva, 28-29 June 1994. In addition, the secretariats of UNCTAD and UNEP brought out a joint report.

5. In the past, eco-labelling tended to focus on product categories which were relatively less important in terms of international trade and, in particular, did not frequently cover products of export interest to developing countries. Consequently, potential impacts on developing countries were usually small. An exception could be found in the pulp and paper sector. However, eco-labelling is becoming more important for developing countries. For example, the Stichting Milieukeur in the Netherlands has created an eco-label for footwear and the European Union is in the process of establishing eco-labels for footwear as well as certain textiles (T-shirts and bed linen). There are also several proposals for eco-labelling in (tropical) timber.

6. Jha et al., op. cit.

7. Council Regulation (EEC) No 880/92 of 23 March 1992 on a Community eco-label award scheme. Official Journal of the European Communities, No L 99, 11 April 1992, p. 1.

8. Henry, John, "Environmental labelling - What is the difference between schemes and will they have an impact on world trade?" Paper presented to the PASC Environmental Forum, Bangkok, 16 May 1994.

9. Report by Ambassador H. Ukawa (Japan), Chairman of the Group on Environmental Measures and International Trade, to the 49th session of the Contracting Parties, 25 January 1994.

10. Elliot, G, "Internalization of environmental costs and implications for the trading system". Paper presented at the GATT Symposium on Trade, Environment and Sustainable Development, Geneva, 10-11 June 1994.

11. In the case of shopping bags, the fact that a specific producing country did not have national regulations regarding air and water emissions was not regarded as a reason for denying the eco-label to the product imported in Canada.

12. Center for Trade Policy and Law, Carleton University and University of Ottawa, "Canada's Environmental Choice Program and its Impact on Developing Country Trade (A Final Report)", submitted to the UNCTAD Workshop on Eco-labelling and International Trade, Geneva, 28-29 June 1994, p.11

13. For example, compliance with an EC directive on urban waste water (91/271/EEC) has been under consideration as one of the possible waste water parameters for eco-criteria for textile products.

14. In the Netherlands eco-labelling scheme on footwear, chrome (Cr) emissions (concentration of chrome in waste water) in leather production should not exceed 0.33 g per kilo of tanned leather. This requirement is derived from existing legal requirements in many European countries limiting the emission concentration to 2 ppm of Cr in industrial discharges. See E.W. Perdijk, J. Luijten and A.J. Selderijk, An Eco-Label for Footwear - Draft of a Study, January 1994, p. 19.

15. It would make no difference if the threshold for the corresponding eco-labelling criteria is the same or more stringent than the regulatory reguirement.

16. In Turkey: the Regulation for Control of Water Pollution of 4 September 1989 sets limits for COD. See: Aruoba, C., "Analysis of probable impact of EU eco-labelling program and related criteria on Turkish textiles and garments exports to European markets". Paper prepared for the Workshop on Ecolabelling and International Trade, Geneva, 28-29 June 1994.

17. Some eco-labelling programmes require that pulp and paper products are made from, or contain a minimum of, recycled materials as one condition for awarding eco-labels in certain product categories. Eco-labels awarded on the basis of recycled content criteria tend to be visible in the marketplace, and failure to qualify for the eco-labels may result in a significant loss of market share. Recycled content criteria for paper and paper products, however, may create problems to foreign producers if domestic supply of waste for use as secondary raw materials is insufficient. Recycled content provisions could discriminate against foreign producers using virgin wood for manufacture.

18. In order to qualify for the label, the fibrous raw material for the paper production must be either virgin wood from regions where "forest management is applied" or waste paper. The definition of forest management would exclude planted forests.

19. One problem is related to the question of comparability of different sources of energy, e.g. fossil fuel based energy production versus hydroelectric power. Another problem is related to the calculation of energy consumption or, at times, the total energy content of a product. These calculations tend to be based on the use of fixed parameters which may not correspond to the reality of developing countries.

20. The consumption of non-renewable resources is calculated as TORE - tonne of oil resource equivalents, including direct consumption of fossil fuels as well as indirect consumption through the use of electricity expressed as number of kWh used. Since in Brazil hydroelectric power -which is not based on fossil fuel- is a relatively large source of energy, calculations based on kWh would overestimate the consumption of non-renewable resources by Brazilian producers.

21. A good example is paper. Importers and retailers may refuse to buy paper that is not eco-labelled.

22. In practice, by setting high standards which can only be complied with by a small proportion of products in the market, the environmental labelling programs make a choice in favour of encouraging competition among manufacturers rather than informing the consumers.

23. Draft criteria for eco-labelling of T-shirts and bed linen in the European Union as well as criteria established by the Stichting Milieukeur for a national eco-label for footwear in the Netherlands were used as reference material. Producers in the textiles industry also drew from experience with other eco-labels, such as the the German MST and MUT and Eco-Tex Standard 100.

24. TDB/41/1(4)

25. The chemical compositions of most of the chemicals used in the leather industry are trade secrets and thus to ensure that they meet limiting values of lethal dose 50 would be difficult for the footwear manufacturers. See Barucha, V.S., "Study on the impact of adoption of ecolabel for Indian textiles and leather products" Paper prepared for the UNCTAD Workshop on Eco-labelling and International Trade, Geneva, 28-29 June 1994.

26. A rough calculation of the extent of the cost increase was indicated in the study by Turkey, which showed that European dyes instead of Indian or Taiwanese dyes would be needed if Turkish firms were to comply with the eco-label. In general European dyes are approximately 40-45% more expensive than those other dyes.

27. See Ho, L., "Ecolabelling programmes: the impact of the EU proposal on Colombian exports of textiles and the initiative for a national scheme". Paper prepared for the UNCTAD Workshop on Eco-labelling and International Trade, Geneva, 28-29 June, 1994.

28. One large exporter of bed linen declared that 50 per cent of the value of ongoing investment was prompted by overseas environmental requirements. Two out of five large-scale firms interviewed estimated that investment to comply with the eco-labelling criteria of the European Union would significantly increase production costs, in one case by 15 per cent. See Foundation Centre for Studies on Foreign Trade (FUNCEX), "Eco-labelling schemes in the European Union and their impacts on Brazilian exports". Paper prepared for the UNCTAD Workshop on Eco-labelling and International Trade, Geneva, 28-29 June 1994.

29. See Ho, op. cit.

30. Barucha, V.S., "Study on the impact of the adoption of eco-labels for Indian textiles and leather products", study being prepared for UNCTAD.

31. See Ho, op. cit.

32. Barucha, op. cit.

33. The few notifications which have been made to the Committee on the Technical Barriers to Trade Agreement include TBT/Notif.92.272 made by Austria on the mandatory labelling of tropical wood and products made of tropical wood or containing tropical wood. Subsequent to the comments made by ASEAN to this notification, Austria withdrew the mandatory label, but instead notified the establishment of a voluntary quality label. See TBT/Notif.93.123 issued by GATT on 22 April 1993.

34. As an alternative, foreign producers could cooperate closely with consumer groups and environmental organizations. Center for Trade Policy and Law, Carleton University and University of Ottawa, op. cit.

35. Council Regulation (EEC) No 880/92, Article 6. See Official Journal of the European Communities, No L 99/1 of 11 April 1992.

36. The European Commission identifies candidate "lead competent bodies" in its member States which are willing to establish draft criteria for a specific product group.

37. The Procedural Guidelines issued by the European Commission call for a market study to be undertaken under "phase 2" of the procedural steps for eco-labelling, i.e. previous to the inventory and environmental impact asessment phases. "The purpose of this phase is to assemble information about the nature of the market, including industrial and economic interests and structures, for the product group, including the distribution of different types and sub-types of product, the market shares held by manufacturers and by main brands on a European Union and Member State basis. It should also provide information about imports to the community". European Commission, op. cit.

38. Vossenaar, R. and V. Jha, "Environmentally-based process and production method standards: some implications for developing countries". Paper prepared for the OECD workshop on Trade and Environment: Issues Pertaining to Process and Production Methods (PPMs), Helsinki, 6-7 April 1994.

39. The reference in the TBT Agreement is as follows:

> "Members shall give postive consideration to accepting as equivalent technical regulations of other Members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfil the objectives of their own regulations" (Article 27).

The SPS Agreement includes the following reference:

> "Members shall accept the sanitary or phytosanitary measures of other members as equivalent, even if these measures differ from their own or those used by other members trading in the same product, if the exporting country objectively demonstrates to the importing Member that its measures achieve the importing Member's appropriate level of sanitary or phytosanitary protection" (Article 14).

40. It is generally accepted that for a standard to be considered equivalent, the objective, narrowly defined, for which the standard is adopted should be the same and that the technical specifications and the methods used for testing should be comparable. The "ISO guide to general terms and their definitions" provides an even narrower definition by stating that the term "equivalent standards" is sometimes used to denote standards of different standardizing bodies on the same subject, which are harmonized. The harmonized standards are defined as "standards on the same subject approved by different standardizing bodies, that establish interchangeability of products, processes and services or mutual understanding of the result or information provided according to these standards".

41. Campbell, Laura, "Certification of environmentally friendly products: selecting comparable environmental criteria". Note presented at the UNCTAD workshop on Eco-labelling and International Trade, Geneva, 28-29 June 1994.

42. Environmental Choice Program, Environment Canada, "Dealing with the trade barrier issue". Paper presented to the UNCTAD Workshop on Eco-labelling and International Trade, Geneva, 28-29 June 1994.

43. For exporters who qualify for the eco-label in the exporting country mutual recognition is a marketing tool. In principle firms are free to use their own national eco-labels in foreign markets. However, the eco-labelling programme of the exporting country may be of limited use as a marketing instrument in overseas markets, especially when a domestic label - with larger consumer acceptance - exists in the importing country. The use of the eco-label of the importing country would thus be more appropriate. From an environmental point of view mutual recognition would make it possible to take account of differences in environmental conditions between countries.

44. Article 6.1 stipulates that "... Members shall ensure, whenever possible, that results of conformity assessment procedures in other Members are accepted, even when those procedures differ from their own, provided they are satisfied that those procedures offer an assurance of conformity with applicable technical regulations or standards equivalent to their own procedures". It further recognizes that prior consultations may be necessary to ensure, inter alia, that confidence in the continued reliability of the conformity assessment bodies can exist, e.g. through accreditation.

45. Jha, et al., op. cit.

46. By adopting criteria from existing programmes in OECD countries the costs of developing criteria can be reduced significantly: research costs can be avoided or kept low.

47. An exception can be found in Japan, where occasionally whole product categories are awarded the Eco-Mark label. For example, there is an award for composting containers, regardless of how they are made or what they are made of, because composting can mitigate solid waste disposal, an important concern in Japan. See: United States Environmental Protection Agency (EPA), Status Report on the Use of Environmental Labels Worldwide, Washington, September 1993.

48. See report TD/B/CN.1/25, "Identification of means by which the competitiveness of natural products with environmental advantages could be improved - reducing the environmental stress of consumption without affecting consumer satisfaction". Report prepared for the Trade and Development Board, Standing Committee on Commodities, third session, Geneva, 31 October 1994.

49. This definition has been developed by ISO Working Group III and covers all kinds of labelling, including self-declaration by manufacturers.

50. Given the contextual specificity of EFPs and the difficulties that may arise in their certification, there may be advantages in exploring such products which may be classified as inherently "environmentally friendly". This could include natural products or such like which do not need eco-certificates in order to establish their environment-friendliness.

51. See United States Congress, Office of Technology Assessment, Green Products by Design - Choices for a Cleaner Environment , OTA-E-541 (Washington, D.C, United States Government Printing Office, October 1992.)

52. Ibid.

53. One possibility for dealing with these difficulties is to limit life cycle analysis to two or three dimensions which are of global interest. These could include: a product's contribution to irreversible environmental or catastrophic impacts, such as ozone destruction, acute hazards to human health, and life-cycle energy consumption. In most other cases, focusing on particular aspects of life cycle and thus classifying a product as an EFP would involve value judgements

which are difficult to universalize. Alternatively, several competing claims regarding environmental attributes can be made by a range of products, all of which would technically speaking qualify as an EFP.

54. See Verbruggen, H., and S. Jongma, "Environmental and trade policies in the Netherlands and the European Communities", paper prepared for UNCTAD under its project INT/92/207, 1993.

55. See Japan External Trade Organization, "EcoFactory - Concept and R&D themes", in New Technology Japan - Special Issue, 1992.

56. Ibid.

57. See Official Journal of the European Communities, No: L168/1.

58. See Johnson, A., "Eco-hype", The Financial Post Magazine, May 1991.

59. See Gallon, G.T., 1991, "What constitutes green products". Mimeograph for "Pollution Probe Canada".

60. Max Havelaar markets coffee which is produced by farmers who are paid fair prices. While the price of this coffee is much more than that of comparable brands and the market is only a niche one, widespread consumer concern has led to the acceptance of this product and they are willing to pay higher prices for it. See TD/B/CN.1/25, August 1994.

61. Cairncross, F., Costing the Earth, Butler and Tanner, Great Britain, 1991.

62. EPA, op. cit.

63. See Gallon., op. cit.

64. See Codex Alimentarius Commission, Revised Draft Guidelines for the Production, Processing, Labelling and Marketing of Organically/Biologically Produced Goods, Joint FAO/WHO Food Standards Programme Codex Committee on Food Labelling, twenty-second session, Ottawa, 26-30 April 1993.

65. However, the EU has proposed that an importing country may:

- require detailed information, including reports established by independent experts, on the measures applied in the exporting country to enable it to make judgements on equivalency;

- conduct on-the-spot examinations of the rules of production and the inspection measures applied in the exporting country.

66. See Dillon, P. S. and M.S. Baram, 1993, "Forces shaping the development and use of product stewardship in the private sector", in Fischer, K. and J. Schot (ed) Environmental Strategies for Industry - International Perspectives on Research Needs and Policy Implications, Island Press, Washington, D.C.

67. See Simmons, P. and B. Wayne., 1993, "Responsible Care: Trust, Credibility, and Environmental Management", in Fischer and Schot, op. cit.

68. To the fullest possible extent GATT discipline could be applied to eco-labelling programmes. For example, the provisions of GATT Articles I (most-favoured nation treatment) and III (national treatment) would imply that product categories selected for eco-labelling should not exclude like or similar products and that criteria should not be based on considerations which favour domestic producers.

69. Henry, op. cit.

70. The Joint Advisory Group (JAG), in its meeting on 8-10 November 1993, mandated ITC to undertake research and technical cooperation activities in the area of eco-labelling in close contact with UNCTAD, GATT and ISO.

71. UNIDO has developed a project and has established a small expert group to discuss eco-labelling for leather and leather products as one of the potential issues to be considered at the UNIDO Leather and Leather Products Regional Consultations.

72. Commission on Sustainable Development, second session (16-27 May 1994), "Trade, environment and development". Note jointly prepared by the secretariats of UNCTAD and UNEP (document E/CN.17/1994/CRP.2 of 11 May 1994).